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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,345	08/24/2006	Yoshiyuki Masuda	SHG-052P2	2849

26875 7590 07/21/2009

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EXAMINER	
BRAINARD, TIMOTHY A	
ART UNIT	PAPER NUMBER
3662	
MAIL DATE	DELIVERY MODE
07/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,345	MASUDA ET AL.	
	Examiner	Art Unit	
	TIMOTHY A. BRAINARD	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 August 0206* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 8, 10-11, and are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and Dvorak et al (US 2004/0021597). Broderick teaches (claim 1) a wave absorber comprising a conduct layer composed of an electric conductor, (fig 1, item 32), (claim 1) a first dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 34), (claim 1) a high-resistance conductor layer having a surface resistivity within a prescribed range (fig 1, item 30), (claim 1) a second dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 28 and/or 26), (claim 10) the conduct layer is a grid like conductor layer configured from a grid like pattern (fig 2). Broderick does not teach sequentially laminating multiple layers of a wave absorber together, a pattern layer having multiple patterns composed of an electric conductor wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern. **Kasevich** teaches (claim 1) and a pattern layer having multiple patterns composed of an electric conductor (col 8, lines 42-68), (claim 1) wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern (fig 15), (claim 4) one of said loop patterns

in said pattern layer has a form where a projecting form is provided on a portion of the lines in loop form (fig 15), (claim 5) the loop patterns in said pattern layer are such that an aggregate of multiple loop patterns of differing form or size constitutes one unit and the space between the pertinent units is disposed at a prescribed interval. **Dvorak** teaches laminating multiple layers of a wave absorber together **(para 5).** It would have been obvious to modify **Broderick** to include sequentially laminating multiple layers of a wave absorber together a pattern layer having multiple patterns composed of an electric conductor wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern, one of said loop patterns in said pattern layer has a form where a projecting form is provided on a portion of the lines in loop form the loop patterns in said pattern layer are such that an aggregate of multiple loop patterns of differing form or size constitutes one unit, and the space between the pertinent units is disposed at a prescribed interval because it is one of multiple design choices with no new or unexpected results. While the combination of **Broderick** in view of **Kasevich** in view of **Dvorak** does not teach (claim 2 and 3) the patterns in said pattern layer comprise loop patterns given a loop form; said loop patterns comprise conductors with a shape having a line width value that is 5 percent to 25 percent relative to the center line length which is the length of the center line of the pertinent loop pattern; the center line lengths of said loop patterns are lengths that are from 60 percent to 140 percent of the wavelength of the EM waves that are the object of absorption; and any one loop pattern in said pattern layer and another loop pattern adjacent to the pertinent loop pattern differ in said center line lengths, (claim 8) the ratio of the thicknesses of said first dielectric

layer and second dielectric layer is in a range from 0.1 to 10, and (claim 11) the grid-like conductor layer has a line width of 100 um or less, and a line center interval that is 1/16 or less of the wavelength of the EM waves that are the object of absorption. It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include the patterns in said pattern layer comprise loop patterns given a loop form; said loop patterns comprise conductors with a shape having a line width value that is 5 percent to 25 percent relative to the center line length which is the length of the center line of the pertinent loop pattern; the center line lengths of said loop patterns are lengths that are from 60 percent to 140 percent of the wavelength of the EM waves that are the object of absorption; and any one loop pattern in said pattern layer and another loop pattern adjacent to the pertinent loop pattern differ in said center line lengths, the ratio of the thicknesses of said first dielectric layer and second dielectric layer is in a range from 0.1 to 10, and the grid-like conductor layer has a line width of 100 um or less, and a line center interval that is 1/16 or less of the wavelength of the EM waves that are the object of absorption layer because each is one of multiple design choices with no new or unexpected results.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Bechtel et al (US 2003/0011306). Bechtel teaches (claim 6) a protective layer is laminated onto a surface layer. It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include a protective layer is

laminated onto at least one of the surface sides of said conduct layer and pattern layer because it is one of multiple design choices with no new or unexpected results.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Pusch (US 4621012). Pusch teaches (claim 7) the surface resistivity of said high-resistance conductor layer is in a range from 100 Ω/square to 100 kΩ/square (col 1, lines 38-47). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include the surface resistivity of said high-resistance conductor layer is in a range from 100 Ω/square to 100 kΩ/square because it is one of multiple design choices with no new or unexpected results.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Nishihata (US 6657005). Nishihata teaches (claim 9) conduct layer is a low-resistance conductor layer with a surface resistivity of 10 Ω/square or less (col 8, lines 24-26). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include conduct layer is a low-resistance conductor layer with a surface resistivity of 10 Ω/square or less because it is one of multiple design choices with no new or unexpected results.

6. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Dvorak et al (US 2004/0021597). Dvorak teaches (claim 12) the conductors used in said conductor layer are composed of optically transparent conductive material (col 2,

lines 8-16) and (claim 12) and dielectric layer and protective layer are composed of optically transparent dielectric material. (col 10, lines 15-17). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include the conductors used in said conduct layer, high-resistance conductor layer and pattern layer are composed of optically transparent conductive material, and said first and second dielectric layer and protective layer are composed of optically transparent dielectric material because each is one of multiple design choices with no new or unexpected results.

7. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Honda et al (US 5961893). Honda teaches (claim 13) one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive oxide (col 7, line 68 to col 8, lines 8). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive oxide because each is one of multiple design choices with no new or unexpected results.

8. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** in view of Honda as applied to claim 13 above, and further in view of Bottari et al (US 2004/0189612). Bottari teaches (claim 14) a conductive oxide is dielectric material containing ATO (para 31). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** in view of Honda to

include a conductive oxide is dielectric material containing ATO because it is one of multiple design choices with no new or unexpected results.

9. Claim 15 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 1 above, and further in view of Sakurai et al (US 20030044623). Sakurai teaches (claim 15) one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive carbon powder (para 16). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive carbon powder because each is one of multiple design choices with no new or unexpected results. With respect to claim 18 it is expected that if multiple layers of a wave absorber are made from a conductive carbon power that one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive carbon powder where carbon powder content differs among the pertinent high-resistance conductor layer, first dielectric layer and second dielectric layer.

10. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** in view of Sakuai as applied to claim 15 above, and further in view of Takahashi (US 5812080). Takahashi teaches (claim 16) a layer is composed of dielectric foam material containing conductive carbon powder (col 7, lines 17-30). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of

Dvorak to include one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric foam material containing conductive carbon powder because each is one of multiple design choices with no new or unexpected results.

11. Claim 17 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** in view of Sakuai as applied to claim 15 above, and further in view of Takahashi (US 5812080). Takahashi teaches (claim 17) a high-resistance conductor layer is composed of dielectric material containing conductive carbon powder (col 11, lines 21-33). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include a high-resistance conductor layer is composed of dielectric material containing conductive carbon powder because each is one of multiple design choices with no new or unexpected results.

12. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432). Broderick teaches a wave absorber comprising a conduct layer composed of an electric conductor, (fig 1, item 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 34), a linear pattern resistance layer having a high-resistance (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 28 and/or 26), . **Broderick** does not teach a pattern layer having multiple patterns composed of a conductor. **Kasevich** teaches a pattern laver having multiple patterns composed of a conductor. It would have been obvious to modify **Broderick** to include a pattern laver having multiple patterns

composed of a conductor because it is one of multiple design choices with no new or unexpected results. while **Broderick** in view of **Kasevich** does not teach the linear patter resistance layer having a higher resistance layer than the conduct layer, it would have been obvious to modify Broderick in view of Kasevich to include the linear patter resistance layer having a higher resistance layer than the conduct layer because it is one of multiple design choices with no new or unexpected results.

13. Claim 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** as applied to claim 19 above, and further in view of Okayama et al (US 2003/0107025). Okayama teaches (claim 20-21) laminating multiple layer of a wave absorber into a pertinent order (col 11, lines 21-33). Broderick teaches said conduct layer, said first dielectric layer, said linear pattern resistance layer, said second dielectric layer, and said pattern layer are in the pertinent order. It would have been obvious to modify **Broderick** in view of **Kasevich** to include a said conduct layer, said first dielectric layer, said linear pattern resistance layer, said second dielectric layer, and said pattern layer are laminated in the pertinent order or said conduct layer, said first dielectric layer, said pattern layer, said second dielectric layer, and said linear pattern resistance layer are laminated in the pertinent order because each is one of multiple design choices with no new or unexpected results.

14. Claims 22-23 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and **Dvorak**. Broderick teaches a wave absorber comprising a conduct layer composed of an electric conductor, (fig 1, item 32), a first dielectric layer composed of

dielectric material in one layer or multiple layers (fig 1, item 34), a linear pattern resistance layer having a high-resistance (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 28 and/or 26), (claim 23) said linear pattern resistance layer is configured either by having linear patterns composed of a high-resistance conductor intersect (fig 2). **Broderick** does not teach a pattern layer having multiple patterns composed of a conductor. **Kasevich** teaches a pattern laver having multiple patterns composed of a conductor, (claim 27) each pattern of said pattern layer differs in at least one or the other of size and form relative to another adjacent pattern (fig 15), (claim 28) each pattern of said pattern layer is configured to have at least one or the other of a form that is a loop form having these forms as its external form, and a form that adds a projecting form to the pertinent one of these forms (fig 15). It would have been obvious to modify **Broderick** to include a pattern laver having multiple patterns composed of a conductor because it is one of multiple design choices with no new or unexpected results. **Dvorak** teaches laminating multiple layers of a wave absorber together **(para 5).** It would have been obvious to modify **Broderick** to include sequentially laminating multiple layers of a wave absorber together in a pertinent order because it is one of multiple design choices with no new or unexpected results. while **Broderick** in view of **Kasevich** and **Dvorak** does not teach the linear patter resistance layer having a higher resistance layer than the conduct layer, it would have been obvious to modify Broderick in view of Kasevich to include the linear patter resistance layer having a higher resistance layer than the conduct layer because it is one of multiple design choices with no new or unexpected results. With

respect to claims 25 and 26, while **Broderick** in view of **Kasevich** and **Dvorak** does not teach the grid-like conductor layer has a line width of 100 um or less, and a line center interval that is 1/16 or less of the wavelength of the EM waves that are the object of absorption, It would have been obvious to modify **Broderick** in view of **Kasevich** and **Dvorak** to include the grid-like conductor layer has a line width of 100 um or less, and a line center interval that is 1/16 or less of the wavelength of the EM waves that are the object of absorption because it is one of multiple design choices with no new or unexpected results.

15. Claim 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** and **Dvorak** as applied to claim 22 above, and further in view of Widagodo et al (US 2004/0094750). Widagdo teaches the high-resistance conductor constituting said linear pattern resistance layer has a volume resistivity that is 1.0 E-4 ohmcm or more and 1.0 E-1 ohmcm or less (para 24) It would have been obvious to modify **Broderick** in view of **Kasevich** and **Dvorak** to include the high-resistance conductor constituting said linear pattern resistance layer has a volume resistivity that is 1.0 E-4 cm or more and 1.0 E-1 cm or less because it is one of multiple design choices with no new or unexpected results.

16. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 22 above, and further in view of Bechtel et al (US 2003/0011306). Bechtel teaches a protective layer is laminated onto a surface layer. It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include a protective layer is laminated onto at least

one of the surface sides of said conduct layer and pattern layer because it is one of multiple design choices with no new or unexpected results.

17. Claim 30 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of **Dvorak** as applied to claim 22 above, and further in view of Dvorak et al (US 2004/0021597). Dvorak teaches (claim 30) the conductors used in said conductor layer are composed of optically transparent conductive material (col 2, lines 8-16). It would have been obvious to modify **Broderick** in view of **Kasevich** in view of **Dvorak** to include all of said component layers are made transparent or semi-transparent because each is one of multiple design choices with no new or unexpected results.

18. Claims 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and **Dvorak** et al (US 2004/0021597) and Abe et al (US 6456819). Broderick teaches a wave absorber manufacturing method comprising a process of radio wave layer composed of a conductor (fig 1, 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fir 1, item 34), a linear pattern resistance layer having linear patterns composed of a high-resistance conductor (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig, item 30). **Kasevich** teaches a pattern layer having multiple patterns composed of a conductor (col 8, lines 42-68), and a process of forming the linear patterns of said linear pattern resistance layer using the screen printing method or ink jet method (col 8, lines 42-68). Dvorak teach laminating a radio reflector layer composed of a conductor that reflects EM waves

(para 5). It would have been obvious to modify Broderick to include a pattern layer having multiple patterns composed of a conductor, and a process of forming the linear patterns of said linear pattern resistance layer using the screen printing method, and laminating a radio reflector layer composed of a conductor that reflects EM waves because it is one of multiple design choices with new or unexpected results. Varaprasado teaches the linear pattern resistance layer using the screen printing method . It would have been obvious to modify Broderick to include the linear pattern resistance layer using the screen printing method because it is one of multiple design choices with no new or unexpected results. While the combination of **Broderick** in view of **Kasevich** and **Dvorak** does not teach a conductor with a higher resistivity than said radio wave reflection layer, It would have been obvious to modify **Broderick** in view of **Kasevich** and **Dvorak** because it is one of multiple design choices with no new or unexpected results.

19. Claims 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and **Dvorak** et al (US 2004/0021597) and Kim (US 2004/0160486). Broderick teaches a wave absorber manufacturing method comprising a process of radio wave layer composed of a conductor (fig 1, 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fir 1, item 34), a linear pattern resistance layer having linear patterns composed of a high-resistance conductor (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig, item 30). **Kasevich** teaches a pattern layer having multiple patterns composed of a conductor (col 8, lines

42-68), and a process of forming the linear patterns of said linear pattern resistance layer using the screen printing method or ink jet method (col 8, lines 42-68). Dvorak teach laminating a radio reflector layer composed of a conductor that reflects EM waves (para 5). It would have been obvious to modify Broderick to include a pattern layer having multiple patterns composed of a conductor, and a process of forming the linear patterns of said linear pattern resistance layer using the screen printing method, and laminating a radio reflector layer composed of a conductor that reflects EM waves because it is one of multiple design choices with new or unexpected results. Kim teaches the linear pattern resistance layer using the ink jet method (para 59). It would have been obvious to modify Broderick to include the linear pattern resistance layer using the ink jet method because it is one of multiple design choices with no new or unexpected results. While the combination of **Broderick** in view of **Kasevich** and **Dvorak** does not teach a conductor with a higher resistivity than said radio wave reflection layer, It would have been obvious to modify **Broderick** in view of **Kasevich** and **Dvorak** because it is one of multiple design choices with no new or unexpected results.

20. Claims 33 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and Sukurai et al Broderick teaches a wave absorber comprising a conduct layer composed of an electric conductor, (fig 1, item 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 34), a planar resistance conductor (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple

layers (fig 1, item 28 and/or 26). Broderick does not teach a pattern layer having multiple patterns composed of an electric conductor wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern. **Kasevich** teaches a pattern layer having multiple patterns composed of an electric conductor (col 8, lines 42-68), (claim 36) each pattern of said pattern layer differs at least in one or the other of size and form relative to another adjacent pattern (fig 15), (claim 37) each pattern of said pattern layer is configured to have at least one or the other of a form that is any one of a loop form having these forms as its external form, and a form that adds a projecting form to the pertinent one of these forms (fig 15). Sukurai teaches dielectric material containing conductive powder (para 16). It would have been obvious to modify Broderick to include a pattern layer having multiple patterns composed of an electric conductor and a dielectric material containing conductive powder because each is one of multiple design choices with no new or unexpected results.

21. Claim 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of Sakuai as applied to claim 15 above, and further in view of Okayama et al (US 2003/0107025). Okayama teaches laminating multiple layer of a wave absorber into a pertinent order (col 11, lines 21-33). It would have been obvious to modify **Broderick** in view of **Kasevich** to include a said conduct layer, said first dielectric layer, said linear pattern resistance layer, said second dielectric layer, and said pattern layer are laminated in the pertinent order or said conduct layer, said first dielectric layer, said pattern layer, said second dielectric layer,

and said linear pattern resistance layer are laminated in the pertinent order because each is one of multiple design choices with no new or unexpected results.

22. Claim 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** in view of Sakuai as applied to claim 15 above, and further in view of Ishikawa (US 4726980). Ishikawa teaches planar resistance layer is composed of material where glass cloth is impregnated with epoxy resin in which conductive powder such as carbon, silver, nickel or the like has been dispersed (col 1, lines 19-27). It would have been obvious to modify **Broderick** in view of **Kasevich** to include planar resistance layer is composed of material where glass cloth is impregnated with epoxy resin in which conductive powder such as carbon, silver, nickel or the like has been dispersed because each is one of multiple design choices with no new or unexpected results.

23. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** as applied to claim 1 above, and further in view of Bechtel et al (US 2003/0011306). Bechtel teaches a protective layer is laminated onto a surface layer. It would have been obvious to modify **Broderick** in view of **Kasevich** to include a protective layer is laminated onto at least one of the surface sides of said conduct layer and pattern layer because it is one of multiple design choices with no new or unexpected results.

24. Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and Sukurai et al and Okayama. Broderick teaches a wave absorber comprising a conduct layer

composed of an electric conductor, (fig 1, item 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 34), a planar resistance layer composed of a dielectric material conductor (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 28 and/or 26). Broderick does not teach a pattern layer having multiple patterns composed of an electric conductor wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern. **Kasevich** teaches a pattern layer having multiple patterns composed of an electric conductor and a process of forming a prepreg (col 8, lines 42-68). Sukurai teaches dielectric material containing conductive powder (para 16). Okayama teaches laminating multiple layer of a wave absorber into a pertinent order (col 11, lines 21-33) and with respect to said planar resistance layer, said first dielectric layer and said second dielectric layer are bonded with interposition of the pertinent planar resistance layer (col 11, lines 21-23). It would have been obvious to modify **Broderick** in view of **Kasevich** to include a said conduct layer, said first dielectric layer, said linear pattern resistance layer, said second dielectric layer, and said pattern layer are laminated in the pertinent order or said conduct layer, said first dielectric layer, said pattern layer, said second dielectric layer, and said linear pattern resistance layer are laminated in the pertinent order because each is one of multiple design choices with no new or unexpected results.

25. Claim 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** and Sukurai et al and Okayama as applied to claim 39 above, and further in view of Ishikawa **(US 4726980)**. Ishikawa teaches planar

resistance layer is composed of material where glass cloth is impregnated with epoxy resin in which conductive powder such as carbon, silver, nickel or the like has been dispersed (col 1, lines 19-27). It would have been obvious to modify **Broderick** in view of **Kasevich** to include planar resistance layer is composed of material where glass cloth is impregnated with epoxy resin in which conductive powder such as carbon, silver, nickel or the like has been dispersed because each is one of multiple design choices with no new or unexpected results.

26. Claims 41 and 42 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** et al (US 5576710) in view of **Kasevich** et al (US 5214432) and **Sukurai** and **Okyama**. Broderick teaches a wave absorber comprising a conduct layer composed of an electric conductor, (fig 1, item 32), a first dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 34), a planar resistance layer composed of a dielectric material conductor (fig 1, item 30), a second dielectric layer composed of dielectric material in one layer or multiple layers (fig 1, item 28 and/or 26). Broderick does not teach a pattern layer having multiple patterns composed of an electric conductor wherein each pattern in said pattern layer differs in either or both of size and form relative to another adjacent pattern. **Kasevich** teaches a pattern layer having multiple patterns composed of an electric conductor and a process of forming a prepreg (col 8, lines 42-68), Sukurai teaches dielectric material containing conductive powder (para 16). Okayama teaches laminating multiple layer of a wave absorber into a pertinent order (col 11, lines 21-33) one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed

of dielectric material containing conductive carbon powder (para 16). t would have been obvious to modify **Broderick** in view of **Kasevich** to include one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive carbon powder because each is one of multiple design choices with no new or unexpected results. Okayama teaches laminating multiple layer of a wave absorber into a pertinent order (col 11, lines 21-33) and with respect to said planar resistance layer, said first dielectric layer and said second dielectric layer are bonded with interposition of the pertinent planar resistance layer (col 11, lines 21-23). It would have been obvious to modify **Broderick** in view of **Kasevich** to include a said conduct layer, said first dielectric layer, said linear pattern resistance layer, said second dielectric layer, and said pattern layer are laminated in the pertinent order or said conduct layer, said first dielectric layer, said pattern layer, said second dielectric layer, and said linear pattern resistance layer are laminated in the pertinent order because each is one of multiple design choices with no new or unexpected results.

27. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** as applied to claim 41 above, and further in view of Pusch (US 4621012). Pusch teaches (claim 7) the surface resistivity of said high-resistance conductor layer is in a range from 100 Ω/square to 100 kΩ/square (col 1, lines 38-47). It would have been obvious to modify **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** to include the surface resistivity of said high-

resistance conductor layer is in a range from 100 Ω/square to 100 kΩ/square because it is one of multiple design choices with no new or unexpected results.

28. Claim 44 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** as applied to claim 41 above, and further in view of Honda et al (US 5961893). Honda teaches (claim 13) one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive oxide (col 7, line 68 to col 8, lines 8). It would have been obvious to modify **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** to include one layer among said high-resistance conductor layer, first dielectric layer and second dielectric layer is composed of dielectric material containing conductive oxide because each is one of multiple design choices with no new or unexpected results.

29. Claim 45 rejected under 35 U.S.C. 103(a) as being unpatentable over **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** in view of Honda as applied to claim 44 above, and further in view of Bottari et al (US 2004/0189612). Bottari teaches (claim 14) a conductive oxide is dielectric material containing ATO (para 31).It would have been obvious to modify **Broderick** in view of **Kasevich** and **Sukurai** and **Okyama** in view of Honda to include a conductive oxide is dielectric material containing ATO because it is one of multiple design choices with no new or unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY A. BRAINARD whose telephone number is

(571) 272-2132. The examiner can normally be reached on Monday - Friday 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/T. A. B./
Examiner, Art Unit 3662

/Thomas H. Tarcza/
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